



# The Advisor

A York County Newsletter for Professional Horticulturists  
and Workers in the Green Industry

March/April  
2002

## “ Editor’s Notes ”

With this edition, we have a new addition to the Advisor. The VCE offers two researched-based horticulture calendars, the LAWN MAINTENANCE CALENDAR and the CALENDAR FOR PRUNING LANDSCAPE TREES AND SHRUBS FOR THE PENINSULA, providing timely information that is specific to the Virginia Peninsula. The Advisor will include the entries current for seasonal Lawn and Pruning activity. The complete annual Lawn and Pruning calendars can be viewed at our web site: <http://www.yorkcounty.gov/vce>; choose Program Areas/ Services; Horticultural Publications.



## HORT CALENDARS

### Lawn Maintenance Calendar – Peninsula Area

#### Fescue-Cool Season Grasses

- March 15 **CRABGRASS CONTROL.** Use a pre-emergence material such as benefin, besulide, DCPA, oxadiazon, or siduron. Use of DCPA may require two treatments, eight weeks apart. Apply when forsythia is in first week of bloom. (Obtain a soil tested every three years – pub 452-125).
- Feb 15 - **OVERSEEDING.** \* *Only if necessary* \* Not necessary every year. If desired, seed 4 lbs. turf type tall  
March 15 fescue per 1000 sq. ft. **CAUTION:** If you use a pre-emergence crabgrass killer, it will prevent the germination of seed applied in the spring.
- March 1 - **FERTILIZER.** None. Use of fertilizer at this time over stimulates top growth, which lessens root  
May 1 reserves making plants less hardy for summer stress conditions ahead.  
**WEED CONTROL.** When mid-day temperatures reach 60 degrees Fahrenheit, apply the combination of 2, 4-D and dicamba or mecoprop (MCPP) to further control winter annual weeds, and to control summer annual weeds such as lespedeza and plantains.  
**DEEP WATERING** every 7-10 days in the absence of rain. Avoid frequent shallow watering. Water in early morning. Night watering encourages fungal development.

#### Bermuda & Zoysia -Warm Season Grasses

- March 1- **Fertilize** - Apply a complete fertilizer in sufficient amount to provide 1 ½lbs. each of N(nitrogen), P2O5  
April 1 (phosphate), and K2O (potash). Example: 15 lbs. of 10-10-10 or 12 lbs. of 8-8-8 per 1,000 sq. ft. or the equivalent of another analysis.

### Calendar For Pruning Landscape Trees And Shrubs For The Peninsula

- March** "Rejuvenation" pruning of overgrown broadleaf evergreens should be done the earlier part of this month. Cut well-established plants back to within 12-18 inches of the ground. Fertilize and water. This can be done to azalea (after bloom), camellia, euonymus, evergreen magnolia, gardenia, hollies, ligustrum, nandina, photinia, pyracantha, and other broadleaf evergreens. Check with office on other plants because they do not tolerate drastic pruning. Drastic pruning now will eliminate spring flowering.
- April** Azaleas and other spring flowering plants, such as forsythia, are pruned immediately after they bloom. Pruned by renewal method. These plants should not be sheared. Complete pruning by June 10. Mow evergreen ground covers such as English ivy, periwinkle, ajuga and mondo at the highest setting > 4 inches.



## Calendar Of Events

- April 6 **Virginia Cut Flower Growers Conference**, Cooperative Extension Building, Virginia State University, Petersburg, Virginia, contact Andy Hankins (804) 524-5962
- April 9 **LANDSCAPE MONEY MAKER WORKSHOP**, 8am-4pm, Quality Inn, 201 E Cary St, Richmond, Contact: Bill Phagan, 352-588-0459, fax: 352-588-0497  
Email: [gibiz@greenindconsulting.com](mailto:gibiz@greenindconsulting.com) or [www.greenindconsulting.com](http://www.greenindconsulting.com)
- April 13 **Gardening 2002**, Christopher Newport University, pre-registration 594-8700
- April 20-27 **HISTORIC GARDEN WEEK IN VIRGINIA**, 804-644-7776, [www.VaGardenWeek.org](http://www.VaGardenWeek.org)
- April 22 **EARTH DAY** - Celebrate: Plant a Tree
- April 26 **NATIONAL ARBOR DAY**
- June 26 **Virginia Latecomers' Pesticide Applicator Recert** 3a, 3b, 5a, 6, 7a, 7b, 10, 60 Norfolk Public Health Center, contact Norfolk VCE, 683-2816,



## BUSINESS BRIEFS

By Shirly Kimmel

### Depreciation

With an ordinary business expense, you deduct the entire cost of the purchase in that tax year, reducing your taxes owed. If you purchase an asset for your business (equipment) that you will use beyond the current tax year, you must spread out the deduction over the asset's expected life. This concept of spreading out a deduction over the "life" of an asset is called depreciation. The asset must meet three requirements in order to be depreciated: it must be used in the business or held to produce income, it must be expected to last more than one year, and it must be something that wears out, gets used up, or loses its value over time

### Section 179

An often-overlooked option for depreciation is *Section 179*. If you are eligible and you elect to use section 179, *you may deduct the entire cost of the asset in the year it is placed in service* in your business instead of spreading the cost out over the life of the asset. The deduction limit is \$24,000.

While the idea of taking a huge deduction may sound good to you, be careful, as there is a downside to using section 179. If you dispose (sell) an asset before the end of its useful life, you must recapture the original deduction on Schedule C. "Recapture" means reversing part of the effects of your original deduction, which in turn increases both self-employment tax and your income tax.

Before you take the section 179 deduction, be sure that you will use the asset in the business *for its entire useful life*.



## BIOTECHNOLOGY AND

[www.ext.vt.edu](http://www.ext.vt.edu)

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## PLANTS

Authors: Randy Vines, Extension Specialist, Biotechnology  
Information; Virginia Tech

Today, biotechnology is being used as a tool to give plants new traits that benefit agricultural production, the environment, and human nutrition and health. The goal of plant breeding is to combine desirable traits from different varieties of plants to produce plants of superior quality. For example, it would be beneficial to cross a tomato plant that bears sweeter fruit with one that exhibits increased disease resistance. To do this, it takes many years of crossing and backcrossing generations of plants to obtain the desired trait. Along the way, undesirable traits may be manifested in the plants because there is no way to select for one trait without affecting others. Advances in scientific discovery and laboratory techniques during the last half of the twentieth century led to the ability to manipulate the deoxyribonucleic acid (DNA) of organisms, which accelerated the process of plant improvement through the use of biotechnology.

### The Science of Plant Biotechnology

#### Genes and the Genome

Plants are made of millions of cells all working together. Every cell of a plant has a complete "instruction manual" or genome that is inherited from the parents of the plant as a combination of their genomes. Genes are found within the genome and serve as the "words" of the instruction manual. When a cell reads a word a specific protein is produced. Proteins give an individual cell, and therefore the plant, its form and function.

The ability to move genes into plants from other organisms, thereby producing new proteins in the plant, has resulted in significant achievements in plant biotechnology that were not possible using traditional breeding practices.

#### Methods of Introducing Genes into Plants

To genetically modify a plant, the thousands of bases of DNA comprising an individual gene are transferred into an individual plant cell where the new gene becomes a permanent part of the cell's genome. Transfer of DNA into plant cells is done using various "transformation" techniques that are the result of discoveries in basic science. One

method to transfer DNA into plants takes advantage of a system found in nature. The bacterium that causes "crown gall tumors" injects its DNA into a plant genome, forcing the plant to create a suitable environment for the bacterium to live. After discovering this process, scientists were able to "disarm" the bacterium, put new genes into it, and use the bacterium to harmlessly insert the desired genes into the plant genome. It was also discovered that plant cells could be "electroporated" or mixed with a gene and "shocked" with a pulse of electricity, causing holes to form in the cell through which the DNA could flow. The cell is subsequently able to repair the holes and the gene becomes a part of the plant genome.

#### Selecting the right cells

When using these methods, new genes are successfully introduced into only a small percentage of the cells, so scientists must be able to "pick out" or "select" the transformed cells before proceeding.

### Traits Being Introduced Into Plants

Changes made to plants through the use of biotechnology can be categorized into the three broad areas of input, output, and value-added traits.

#### Input traits

An "input" trait helps producers by lowering the cost of production, improving crop yields, and reducing the level of chemicals required for the control of insects, diseases, and weeds. Input traits that are commercially available or being tested in plants:

- Tolerance to broad-spectrum herbicides
- Resistance to diseases caused by viruses, bacteria, fungi, and worms
- Protection from environmental stresses such as heat, cold, drought, and high salt concentration

#### Output Traits

An "output" trait helps consumers by enhancing the quality of the food and fiber products they use. Output traits that consumers may one day be able to take advantage of:

- Nutritionally enhanced foods that contain more starch or protein, more vitamins, more anti-oxidants (to reduce the risk of certain cancers), and fewer trans-fatty acids (to lower the risk of heart disease)
- Foods with improved taste, increased shelf-life, and better ripening characteristics

- Trees that make it possible to produce paper with less environmental damage
- Nicotine-free tobacco
- Ornamental flowers with new colors, fragrances, and increased longevity

#### "Value-added" traits

Genes are being placed into plants that completely change the way they are used. Plants may be used as "manufacturing facilities" to inexpensively produce large quantities of materials including: Therapeutic proteins for disease treatment and vaccination, textile fibers, biodegradable plastics and oils for use in paints, detergents, and lubricants. Plants are being produced with entirely new functions that enable them to do things such as detecting and/or dispose of environmental contaminants like mercury, lead, and petroleum products. Plants with "input traits" that are commercially available include: **Roundup Ready®** soybean, canola, and corn: resistant to treatment with Roundup herbicide that may result in more effective weed control with less tillage, and/or decreased use of other, more harmful herbicides; **YieldGard®** corn and **Bollgard®** cotton: express an insecticidal protein that is not toxic to animals or humans which protects the plant from damage caused by the European corn borer, tobacco budworm, and bollworm; **Destiny III®** and **Liberator III®** squash: resistant to some viruses that destroy squash.

#### Issues with Genetically Modified Plants Benefits and Risks

The list of plants and plant-derived products made as a result of modern biotechnology is ever-increasing. Many transgenic plants, such as herbicide resistant soybeans, have been widely adopted by producers signifying their satisfaction, while other products, such as the delayed softening "FlavrSavr" tomato, are no longer on the market. Some of the potential benefits from using transgenic plants include: reduced crop production costs and increased yields; healthier, more nutritious foods; reduced environmental impact from farming and

industry; increased food availability for underdeveloped countries.

#### Safety, Regulation, and Labeling In the United States

The FDA, EPA, and the Dept of Agriculture extensively review products of biotechnology to ensure that they are safe for public use and the environment. GM foods require labeling only if they differ significantly in safety, composition, or nutritional content when compared to their non-GM counterparts. Additionally, the FDA requires a GM food to be labeled if it contains a known allergen unless data have shown that there is no allergy risk.

**Resource:** For a complete read of this article see: [www.ext.vt.edu/resouces](http://www.ext.vt.edu/resouces); choose Commercial Greenhouse, Nursery & Landcaping, VCE Publication Number 443-002, March 2002



## WHAT'S ONLINE?

### Growit.com

[www.growit.com](http://www.growit.com)

By Shirlie Kimmel

Making Forbes magazine's Best of the Web B2B list, Growit.com provides information to the wholesale nursery industry, including a buyer's guide, data about insects, diseases, propagation techniques, USDA hardiness zone maps and

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photographs. Users can upload lives updates on plant material inventories and availability. Industry vendors can customize product offerings for search engines.